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AUTHOR Douds, Keith McLaughlin
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ABSTRACT

The costs associated with alcohol abuse are staggering. Because of the pervasiveness of alcohol abuse, virtually every psychological practitioner will encounter it. This paper reviews literature about a number of common treatments for abusive drinkers. Specific treatment procedures are evaluated from both research and clinical perspectives. Alcohol treatment research that presents follow-up data for one-year and longer is emphasized. It is claimed that while the efficiency of individual psychotherapy and pharmacological agents are not substantiated by the research, some aversion methods, cognitive-behavioral skills training approaches and family therapies have demonstrated effectiveness in treating abusive drinkers. The paper claims the most effective way to treat abusive drinkers uses a multi-modal approach which would initially target abusive drinking directly, although aversion therapies are not indicated if they are neither necessary nor desired to curtail alcohol consumption. Moreover, it is concluded that, while abstinence or a nonabusive drinking baseline is being established, a combination of skills training and family therapies seemingly represent the most expedient means of maintaining treatment gains. Finally it is stated that support groups can help replace the previously dysfunctional environmental contingencies with the interpersonal resources necessary for recovery. (Author/ABL)

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TREATING ABUSIVE DRINKERS:
A REVIEW OF LONG-TERM OUTCOME RESEARCH SINCE 1980

A Doctoral Research Paper

Presented to

the Faculty of the Rosemead School of Psychology

Biola University

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Psychology

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by

Keith McLaughlin Douds

August 1990

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A REVIEW OF LONG-TERM OUTCOME RESEARCH SINCE 1980

by

Keith McLaughlin Douds

APPROVED:

Robert E. Laughlin Date 8/20/90

First Reader

Earl Henslin Date 8/20/90

Second Reader

APPROVED:

Kirk J. Edwards

Dean

8/20/90

Date

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ABSTRACT

TREATING ABUSIVE DRINKERS:
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Keith McLaughlin Douds

The costs associated with alcohol abuse are staggering. Because of the pervasiveness of alcohol abuse, virtually every psychological practitioner will encounter it. This paper reviews a number of the common treatments for abusive drinkers. Specific treatment procedures are evaluated from both research and clinical perspectives. Alcohol treatment research that presents follow-up data for one-year and longer is emphasized. While the efficiency of individual psychotherapy and pharmacological agents are not substantiated by the research, some aversion methods, cognitive-behavioral skills training approaches and family therapies have demonstrated effectiveness in treating abusive drinkers. Some conclusions and implications for practice are presented.

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ACKNOWLEDGMENTS

The temptation to bow before a Golden Calf is a long-standing one. To the extent that alcohol replaces healthy ways of living and moving socially, emotionally and spiritually, it represents a form of idolatry. To the extent that alcohol use contributes to the dissolution of the way we live and move socially, emotionally, and spiritually, it is abusive. To the degree that we have misunderstood the needs of those who struggle with self-destructive drinking, we have contributed to this idol worship. The costs associated with alcohol abuse are only now being appreciated as the larger sociopolitical and spiritual fabric of this nation has been stretched beyond denial. This paper hopefully represents acknowledgment of the ubiquitous destruction associated with alcohol, as well as testimony to the hope in treating, overcoming and recovering from abusive drinking.

I would like to acknowledge and thank the thoughtful supervision and editorial input of Dr. Robert Larzelere, and the clinical convictions of Dr. Earl Henslin. The latter has helped instill an affinity for scrutinizing personal drugs of choice, viz., golden calves. The encouragement and feedback of my Tri-City friends has also been invaluable. Finally, I would like to express appreciation for the support of my wife Sheri, whose partnership has helped keep me grounded and kneeling before the God who deserves my reverence.

Treating Abusive Drinkers:
A Review of Long-Term Outcome Research Since 1980

Introduction

The costs associated with alcohol abuse are staggering. Annual casualty estimates commonly include thousands of alcohol-related deaths, as well as millions of social, emotional and spiritual injuries. As a health care concern, the treatment of alcohol abuse and alcohol-related physical complications comes with a yearly bill in excess of $100 billion (Desmond, 1987). The Sixth Special Report to Congress on Alcohol and Drug Abuse from the Secretary of Health and Human Services provided further affirmation of the gravity of these costs. The report claimed that fully 18 million Americans above the age of 18 have problems related to alcohol abuse. Equally shocking were reports that an estimated 30% of the country's youth, or roughly 4.6 million adolescents, experience negative consequences associated with alcohol consumption (Gunby, 1987).

Alarmingly, these figures expand exponentially when considering those immediately involved with, or directly influenced by, problem drinkers. For example, the recent deluge of literature concerning the legacy of adult children of alcoholics (e.g., Woititz, 1983) has further attested to this tragedy. In light of the problem's pervasiveness, it is

little wonder that McLellan, Woody, Luborsky, O'Brien, and Druley (1982), have made claims of pandemic proportions, suggesting that alcohol abuse "is arguably the most complex, heterogeneous, and chronic health problem in the world" (p. 1428). Consequently, the challenge confronting all health care providers involves how best to treat abusive drinkers. Related to this goal are a range of queries concerning treatment efficacy, the most focal of which considers whether some treatments are more effective than others, or if some interventions are differentially effective for different types of alcoholics and/or problem drinkers?

Answers to these and other questions related to the treatment of abusive drinking increasingly gain a sense of urgency as the total expense of alcohol treatment approaches 15% of the national health bill (Holden, 1987). This enormous financial burden also highlights the importance of discovering efficient treatment procedures. Moreover, in accordance with Miller and Hester's (1980) contention that "virtually every mental health professional" will treat clients whose alcohol consumption could be diagnosed as either dependent or problematic, this author suggests that competency in identifying and/or treating abusive drinking can no longer be the sole prerogative of those specializing in such treatment. Rather professional and ethical guidelines mandate that practicing psychotherapists be aware of the variety of alcohol treatments available, in order to insure at least the most expedient referral.

Toward these ends, this paper surveys recent outcome research with the principle aim of evaluating the long-term effectiveness of treatments for alcohol abuse. For inclusion in this review, studies

had to meet the following criteria, largely patterned after those employed by Sobell, Brochu, Sobell, Roy, and Stevens (1987): (a) research must have been reported in an English-language publication, (b) research must have been published since 1980, (c) research subjects must have a primary diagnosis of alcohol abuse or dependence (i.e., alcoholism), and, (d) studies must present treatment outcome data for a follow-up period of at least one year's time.

Prior to reviewing outcome research examining treatments for alcohol abuse, a few critical issues require elaboration. Among them is the controversy over realistic treatment options and what constitutes a successful treatment outcome. Moreover, there is considerable definitional and diagnostic variation concerning alcoholism. One example is the confusing range of terminology used in the literature, such as the diversity of how drinking behavior is operationalized. A recent study of heavy drinking among young men illustrates this predicament. When compared to previous investigations, Alterman et al.'s (1990) "conservative" criteria for designating "problem drinkers" substantially dropped the initial estimate of abusive drinkers in their sample from 74% to 40%. Finally, sections devoted to considering current etiologic positions on alcoholism, as well as the research's methodological state of affairs, will preface descriptions of the outcome studies.

Critical Considerations for Alcohol Abuse Treatment

Historically, civilizations have demonstrated predictable responses when confronting potentially destructive behaviors, such as the consumption of alcohol (Knott, 1986). They typically pass laws

in efforts to restrict or prohibit such behavior, or have attempted to inhibit these dubious acts by declaring them immoral. Knott (1986) suggested that another societal response might be to "designate the behavior as disease" (p. 1).

Controversy

The disease model of alcoholism was championed by E. M. Jellinek (1960), whose post World War II efforts culminated in the classic volume, The Disease Concept of Alcoholism. The thrust of this seminal work was that alcoholism is a disease entity similar to that of cancer. Jellinek extended this metaphor by observing that in spite of variations, alcoholism is characterized by pathological states with identifiable symptoms, and a predictable developmental course. For example, symptoms typically include loss of control, greater quantity and frequency of usage, and a progressive stage-wise deterioration of functioning. Similar to cancer, Jellinek suggested that alcoholism was treatable, albeit resistant to cure. Accordingly, abstinence from alcohol was esteemed to be an essential treatment condition. While grounded in methodological shortcomings and characterized by theoretical gaps, Jellinek's model achieved widespread acceptance despite subsequent failure to demonstrate the alleged physiological and psychological stages of addiction (Schonfeld & Morosko, 1988).

Critics of Jellinek's disease model have emphasized that its reductionistic approach has greatly circumscribed research and implementation of alternative treatment approaches. For example, W. R. Miller (1983), one of the prominent investigators of alcohol abuse, has claimed that abstinence-oriented treatment methods "are not the final answer for all problem drinkers" (p. 74). Others, such as

Fingarette (1985), have vociferously attacked the disease model in the belief that it absolves personal responsibility for self-destructive drinking behavior.

Consequently, the acceptance of the disease model of alcoholism has waned amidst some pronounced objections. In fact, a range of divergent definitions, theories, and treatment philosophies threaten to obfuscate efficacious and efficient intervention. Regrettably, much of the debate revolving around the definition, theory and treatment of problems related to alcohol consumption seems more emotionally than scientifically based (Ingram & Salzberg, 1988). Of particular note is what is commonly referred to as the "controlled drinking controversy" (Miller, 1983). This debate focuses on the advocacy of nonabusive, or controlled drinking as a viable treatment goal for some problem drinkers. Hence, respective professional camps are ostensibly divided between the treatment goals of controlled drinking and the disease model goal of abstinence.

Miller (1983) and others, such as Sanchez-Craig, Annis, Bornet, and MacDonald (1984), have pointed toward "sufficient research evidence" when advocating controlled drinking treatments. While conceding the need for more exact criteria to differentially diagnose the degree of alcohol abuse, and hence, provide matched interventions, moderation oriented proponents have outlined some "common-sense rules" (Miller, 1983). For example, Miller (1983) noted that the onset of medical complications, such as liver disease, contraindicates a controlled drinking approach. Still other researchers have maintained more conservative treatment objectives consistent with the disease model.

In adopting abstinence as a primary treatment goal, Vaillant (1983) and Laundergan (1982) did not rule out the possibility that a small percentage of abusive drinkers may return to non-destructive drinking. Instead, they have insisted that the difficulty of identifying those for whom moderation may be a plausible outcome warrants the most cautious course of treatment. Given the ravaging costs associated with abusive ethanol consumption, a related caveat by Smith, Milkman, and Sunderwirth's (1985) seems most justifiable concerning alcoholics: "abstinence . . . is presently the most effective long-term treatment for addictive disease" (p. 157).

Schonfeld and Morosko (1988) advocated that research and clinical resources should emphasize treatment issues, such as relapse prevention, while deemphasizing the etiological debate. This author agrees that efforts in alcohol treatment research should primarily focus upon questions concerning efficient and efficacious intervention procedures. Indeed, the goal in reviewing the alcohol treatment literature is to elucidate what is most clinically relevant. Controlled drinking emerges as germane to this effort for two reasons: (a) the controversy has heightened the need for greater definitional and diagnostic clarity concerning alcoholism, and (b) some of the studies reviewed consider controlled drinking a "successful" treatment outcome.

Diagnosis

> [An alcoholic is] one who is unable consistently to choose whether he shall drink or not, and who, if he drinks, is unable consistently to choose whether he shall stop or not.
> (Mark Keller, quoted in Laundergan, 1982, p. 14)

Traditionally, the disease states associated with alcoholism were the treatment prerogative of physicians (Knott, 1986). However, in the last half century, the development of major organizations such as the National Council on Alcoholism (NCA) and the proliferation of non-medical perspectives on alcohol related problems have generated a plethora of definitional and etiological positions. In spite of these numerous attempts to define "excessive alcohol ingestion," little consensual agreement exists among the diverse professional, para-professional and public-policy voices (Knott, 1986). Jellinek (1960) had originally suggested five types of alcoholism, which were distinguishable by drinking characteristics. Later in 1972, the NCA advanced a list of 86 clinical, behavioral, psychological and attitudinal criteria descriptive of alcoholism. While these incredibly rich clinical parameters included statistical support for diagnostic levels of confidence, Knott (1986) noted that the NCA efforts have been criticized as being "too cumbersome" for clinicians.

In recent years the nomenclature of the American Psychiatric Association (DSM-III & DSM-III-R) has maintained a critical distinction in evaluating Psychoactive Substance Use Disorders. Essentially, these disorders indicate a constellation of cognitive, behavioral and physiological symptoms involving impaired control of a substance and continued use in spite of the threat of adverse legal, medical, vocational, and other interpersonal problems. The crucial diagnostic distinctions discriminate between alcohol use patterns that are dependent versus abusive. For example, a person diagnosed with Alcohol Abuse is characterized by maladaptive patterns of alcohol usage involving impairment in, or exacerbation of, social,

occupational, psychological or physical problems. In contrast, Alcohol Dependence is diagnostically indicated by similar psychosocial, emotional and vocational disturbances, as well as the physiological markers of tolerance and withdrawal. Thus, Alcohol Abuse represents problematic alcohol consumption that fails to meet the criteria for Dependence. With these definitions as guidelines, we can conclude that all dependent drinkers, viz. alcoholics, are abusive drinkers, whether continuously or episodically so, whereas abusive drinkers may not yet display the physiological manifestations of alcohol addiction.

Etiology

Because of the American Psychiatric Association's commitment to maintain a descriptive approach in presenting diagnostic criteria for the range of Mental Disorders included in the DSM-III-R, it is atheoretical with regard to the etiology of Alcohol Abuse and Dependence. Nevertheless, the omission of etiological factors must not be construed to signify the unimportance of the psychosocial and biological mechanisms involved in the development of abusive drinking behavior. On the contrary, abusive drinking is a complex multidimensional disorder associated with a range of biological, psychological and sociocultural factors (Zucker & Lisansky-Gomberg, 1986). Moreover, alcohol abuse treatments, like other forms of behavioral science intervention, are guided by theoretical discussion. Consequently, a brief survey of the etiology of abusive drinking behavior is considered relevant to the review of treatment outcome research.

The multifaceted etiological perspective necessary for accurately understanding substance use disorders holds that "no single etiologic equation" will provide a sufficient or adequate position on problematic drinking (Nathan, 1980). The breadth of psychosocial and behavioral complications accompanying alcohol abuse further attests to the equally diverse range of treatments currently offered. The research on biophysiological and genetic factors involved in the development of abusive drinking is equivocal to date. While suggestions of predisposing factors exist, a clear genetic component for dependent or abusive drinking has not been clearly identified.

Smith et al. (1985) surveyed recent research exploring the body's fight against the biochemical states synthetically created by alcohol and other drugs. In spite of promising research examining differential production of enzymes required to keep metabolism functioning at homeostasis, no conclusive differences in the methods, routes or location of alcohol metabolism currently exists. More recently, Blum and his colleagues (1990) reported a high correlation between alcoholism and the dopamine D2 receptor gene. In a blind experiment, scientists found that the presence of the gene correctly identified 77% of the alcoholics sampled, while its absence accurately classified 72% of the nonalcoholics. This surprisingly strong correlation notwithstanding, Blum and associates declined to promote the dopamine D2 receptor gene as a definitive diagnostic marker of alcohol abuse. In fact, despite their encouraging findings the authors urged cautious interpretation of the results, especially prior to further replication.

A variety of sociocultural, behavioral and psychoanalytic etiological perspectives have also been advanced. For example, the Tension Reduction Hypothesis asserts that alcohol is primarily used to relieve anxiety. Subsequently, this model posits that the complex interaction of the biological effects and cognitive expectancy sets is the driving mechanism behind the development of problematic drinking (Nathan, 1980).

Among the other positions gaining notoriety is the Biopsychosocial Process Model advocated by Zucker and Lisansky-Gomberg (1986). As implied by its name, this etiologic perspective encompasses a range of contributing factors while discouraging simplistic and reductionistic explanations. For example, in challenging the conclusions of Vaillant and Milofsky's (1982) longitudinal analysis of abusive drinking, Zucker and Lisansky-Gomberg (1986) persuasively argued for the more prominent role of "early environmental difficulties" in the development of alcohol dependence. Through their review of all longitudinal data available, the authors noted that several childhood difficulties, including the presence of anti-social behavior, more social/scholastic failures, and heightened marital/familial tension, correlated consistently with later "alcoholic" drinking. Multidetermined developmental models are increasingly gaining support for appreciating the frequent presence of abusive drinking in family histories and the likely interaction of biological and environmental factors (Laundergan, 1982).

While an ongoing need for developmental research investigating alcohol abuse exists, the critical etiologic issue involves integrating causal explanations. Among the common recommendations for

causal pathway research are social learning mechanisms, especially among peer groups. Given the impact of various social influences, it has been suggested that alcohol abuse may develop differently at different developmental junctures (e.g., Nathan, 1980; Zucker & Lisansky-Gomberg, 1986). The advantage of a model of alcohol abuse that avoids "reductionistic traps" is self evident. The potential treatment gains of such an etiological position are ostensibly more elusive. However, as primary, secondary and tertiary interventions into the enormous problems associated with alcohol abuse are informed by a balanced theoretical perspective, it is suggested that the capacity to match individuals with optimal treatments will be further enhanced (Finney & Moos,1986).

Methodological Concerns with Alcohol Treatment Research

Thoughtful consideration of the question of alcohol treatment effectiveness requires a thorough understanding of the external, internal and measurement validity of research in this area. External validity is compromised when a study's results cannot be generalized, whereas internal validity raises important questions about the study's conclusions. As Emrick and Hansen (1983) insisted, flaws in design, measurement, assessment and data analysis threaten to render research useless at best and misleading at worst. In fact, generalizable data is only marginally valuable if, for example, a subject's actual drinking behavior and measures of his or her behavior do not concur (Nathan & Skinstad, 1987).

Nathan and Lansky's (1978) comprehensive review of the methodological problems in addictions treatment research produced

a list of 11 "common" pitfalls. More recently, Ingram and Salzberg (1988), have expanded this number to include a total of 15 items that typically threaten the conclusions of alcohol treatment studies. The goal here is not to expand on either article's methodological considerations, but rather to summarize the 6 critiques that emerge as the most pressing methodological problems in the studies under review here.

1. Failure to provide for adequate, multidimensional treatment outcome measures tapping a full range of patient behavior (Nathan & Lansky, 1978). The importance of multiple outcome criterion measures is expressed throughout the literature. Emrick and Hansen (1983) designated that outcome measures must extend beyond solely evaluating drinking behavior. As such, they recommended that relevant outcome variables should include measures of psychological, physical, marital/familial status, vocational and social adjustment, life stressors and additional treatment information, as well as indices that assess drinking behavior. Regrettably, many studies have neglected the importance of variables other than drinking. Multiple follow-up measures not only bolster the strength of a study's findings, but also afford greater insight into the mediating effects of particular treatments (Emrick & Hansen, 1983).

2. Failure to compare self-report measures with other sources of information (Emrick & Hansen, 1983). Many researchers have questioned the reliability of the self-reports generated by abusive and dependent drinkers. Given the widespread belief that denial is pandemic among abusive drinkers, the accuracy of self-report instruments is particularly dubious, especially when drinking

behavior itself is being measured (Nathan & Skinstad, 1987). As Sobell and his colleagues (1987) noted, very few studies have attempted to ascertain whether or not subjects were alcohol free during assessment interviews.

Despite these limitations and the purported invalidity of abusive drinkers' self-reports, other researchers have presented more encouraging positions. For instance, O'Farrell and Maisto (1987) reported that by and large studies do not support the existence of a "systematic underreporting" by those with alcohol abuse problems. However, the authors conceded that the alleged self-report bias may emerge as a research confound when subjects are shown to have positive blood alcohol levels. In other words, subjects who were determined to be intoxicated during follow-up assessments were more likely than sober subjects to misrepresent their alcohol use.

Although self-reports remain the predominant instrument utilized in alcohol treatment outcome evaluations, the trend towards collateral reports and other sources of outcome data has increased (Nathan & Skinstad, 1987). For example, 85% of the studies reviewed by Sobell et al. (1987) used at least two methods for measuring outcome. Moreover, the increased use of biological markers also represents a promising response to the concern over assessing alcohol use. However, O'Farrell and Maisto (1987) cautioned that biological measures, such as assessments of blood alcohol levels, may still be too crude and unreliable to warrant indiscriminate optimism. Nevertheless, the development of biological assessment devices appears to be part of the growing trend toward obtaining convergent sources of data.

3. Failure to ensure that comparably trained therapists provide both experimental and control treatments, and failure to ensure that these interventions are comparably intensive (Nathan & Lansky, 1978). Comparative treatment research results are confounded if treatment effects are indistinguishable from therapist effects. For example, if the study's design does not match the participating clinicians on attributes like training, experience, motivation and supervision across the differing treatment conditions, then treatment effects will not be conclusively obtained (Nathan & Skinstad, 1987).

4. Failure to gather sufficient pretreatment data on a range of subject characteristics, especially those variables assessed in follow-up interviews, and failure to examine for pretreatment differences between treatment groups (Sobell et al., 1987). Several studies have reported correlations between treatment outcome and patient variables. Generally, age, occupational and marital status, and history and pattern of drinking behavior are significantly correlated with treatment outcomes (Nathan & Skinstad, 1987). In this light, the absence of comprehensive pretreatment assessments in any alcohol treatment evaluation is myopic. Moreover, few alcohol abuse treatment studies have employed pre-post test designs or random assignment of patients to treatment groupings (Powell et al., 1985).

In their review of 85 treatment evaluation studies published between 1976 and 1984, Sobell et al. (1987) noted the discouragingly small percentage of studies that reported critical pretreatment information. For example, prior treatment for alcohol-related problems, the presence or absence of physiological indications of tolerance and withdrawal (i.e., dependence), and

severity of dependence, were reported in less than 40% of the studies. Given the markedly poorer prognosis for chronically dependent drinkers (e.g., Miller & Hester, 1980; Miller & Hester, 1986; Nathan & Skinstad, 1987), the omission of quantity/frequency and other historical measures of drinking behavior also loom as conspicuous shortcomings. The absence of such data largely precludes ferreting out direct treatment effects from the effects of subsequent or multiple treatments for drinking problems. Fortunately, instruments such as the Alcohol Use Inventory (AUI), and the Michigan Alcoholism Screening Test (MAST), continue to demonstrate promise as multifaceted assessments of historical drinking patterns (Nathan & Skinstad, 1987).

5. Failure to adequately account for treatment dropouts (Nathan & Lansky, 1978). The problem of subject attrition is a well documented methodological concern. Generally, researchers agree that failing to account for subjects lost to outcome assessments "unfairly inflates success estimates" (Nathan & Skinstad, 1987). Emrick and Hansen (1983) further advocated Nathan and Lansky's conservative approach to handling attrition. That is, they suggested that subjects lost during treatment and follow-up assessment should be included in data analysis as "treatment failures" whenever possible.

6. Failure to adequately describe the treatment provided, and the confounding of results because of more than one treatment in a single study design (Ingram & Salzberg, 1988). Possibly self-evident though sadly lacking in some studies reviewed here are comprehensible treatment descriptions. If the goal of an outcome

evaluation review is to elucidate relative treatment efficacy, then accomplishing this task without descriptions detailing alcohol abuse treatments resembles an exercise in blind faith. As Sobell et al. (1987) noted, not providing treatment summations obstructs direct scrutiny of the study's findings. Moreover, as is the case in studies examining the increasingly popular multimodal treatment regimes, omitting elaboration of the interventions used further complicates efforts to evaluate or replicate the examination of individual treatment components.

Treating Abusive Drinkers: Methods and Outcomes

This review of the literature in the alcohol abuse treatment field will focus exclusively on long-term outcome research. For a more complete perspective, the reader is referred to earlier reviews (e.g., Miller & Hester, 1980; 1986). For example, Miller and Hester's (1980) review merits particular distinction for its consideration of the entire volume of alcohol treatment evaluations prior to 1980. Summaries of Miller and Hester's scrutiny of more than 500 outcome studies will inform the discussions of the respective treatment categories below.

This review will emphasize alcohol abuse treatment evaluations that present outcome data for a follow-up period of at least one year. The rationale behind this distinctive involves the belief that the longer the follow-up period, the more conclusively comments regarding treatment efficacy can be made. As early as 1978, Nathan and Lansky recommended that longer follow-up periods were an essential requisite for establishing lasting therapeutic gains. The

importance of considering longer term posttreatment intervals gleans further support from Moos and Finney (1983), who have observed that significant relapse rates occur most frequently during the first year following treatment. Wiens and Menustik (1983) have also suggested that the highest potential for relapse occurs in the first four months following treatment. Although more expedient, shorter follow-up intervals fail to appreciate the remitting nature of alcohol abuse. In fact, alcohol abuse is characterized by drinking behavior that is likely to wax and wane between periods of abstinence, non-problem drinking and abusive drinking (Nathan & Skinstad, 1987).

Largely because of this, Vaillant (1983) has been among the strongest advocates of longitudinal research. His well chronicled exploration of alcoholism also suggested that nominal follow-up periods cannot adequately distinguish between the interaction of treatment effects and the natural history of abusive drinking. As a baseline, Miller and Hester (1980) have estimated that between 20% and 25% of abusive drinkers will experience recovery or "spontaneous remission" from alcoholic drinking, without any treatment. Despite these convincing arguments, longer follow-up intervals will likely pose methodological difficulties, such as controlling for attrition. Nevertheless, because Vaillant et al. (1983) have emphasized that clinically relevant evaluations must appreciate alcohol abuse as a chronic disorder, this reviewer made every effort to emphasize only treatment outcome research incorporating this temporal perspective. Consequently, studies not qualifying for this review's posttreatment follow-up criterion are referenced where appropriate, but not examined in detail.

Discussion of some specific treatments for alcohol abuse will follow in four broad categories. In spite of the fact that these general methods of intervention are frequently combined to form multimodal treatment regimes which share considerable affinity for one another, they shall be explored, where possible, as separate treatment elements. The four categories include the following: psychopharmacological interventions, aversion therapies, cognitive-behavioral approaches, and individual and family psychotherapies.

Psychopharmacological Interventions

Of all the medications that have been utilized in the treatment of alcohol abuse the most common is disulfiram (Miller & Hester, 1986). Discovered accidently, disulfiram, whose trade name is Antabuse, works as a powerful emetic agent when combined with ordinary beverage alcohol (Miller & Hester, 1980). Interacting with the presence of alcohol in one's system, the resulting disulfiram-ethanol reaction (DER) involves a number of bodily functions associated with the autonomic nervous system. For example, symptoms of this extremely unpleasant DER typically include heart palpitations. nausea and vomiting, difficulty breathing, sweating, headaches, dizziness and a drop in blood pressure. While the specific mechanisms for the DER remain somewhat uncertain, Miller and Hester (1980) reported that disulfiram is thought to block the production of a critical enzyme, aldehyde dehydrogenase, which helps metabolize alcohol.

Regrettably, in spite of the popularity of Antabuse as a treatment for abusive drinking, very few controlled investigations of it have been published (Miller & Hester, 1986). In fact, Liskow and Goodwin

(1987) have reported that no established experimental rationale for disulfiram use existed prior to 1980. They largely attributed this to essential design flaws in the few studies published to that point. Nevertheless, the research on disulfiram cited by Miller and Hester (1980) suggested slightly favorable results, especially with older patients whose drinking problems could be characterized as more severe. Still, because of both the paucity of disulfiram studies and the methodological shortcomings of those studies, Miller and Hester (1980) cautioned against definitively ascribing disulfiram as anything more than an active placebo.

More recently a study reported by Fuller (1984) appears to have overcome many of the previous methodological flaws. In this investigation, 128 alcohol dependent subjects, all of whom were receiving routine counseling for alcohol problems, were randomly assigned to one of three conditions, two disulfiram groups (250 mg/day or 1 mg/day) or a placebo group (riboflavin) for one year. Subjects receiving disulfiram treatments were only told they were receiving disulfiram, without revelation of the dosage. The placebo group members were only told they were receiving a vitamin. Compliance was established by urinalysis throughout the year. Fuller (1984) reported that multiple assessment measures revealed differences in abstinence favoring the disulfiram groups over the placebo condition through the first 8 months. However, at the end of the year follow-up period, no significant differences existed between any of the groups.

Fuller (1984) reported that he and his associates concluded that the lack of differences between the two disulfiram groups was more

indicative of the perceived threat of a DER than of the drug's actual pharmacological properties. Fuller further observed a strong association between compliance to disulfiram and alcohol abstinence. However, on the basis of the data provided it remains indeterminable whether compliance with the drug leads to abstinence, or whether individuals motivated toward abstinence also comply with disulfiram treatment. Other studies with disulfiram have indicated that abstinence and/or improvement rates are not significantly greater than those anticipated of non-significant placebo treatments (Liskow & Goodwin, 1987).

Wilson, Davidson and Blanchard (1980) studied a form of disulfiram use that requires surgical implantation. Wilson et al.'s initial subject pool consisted of 100 "Skid Row" alcoholics. Of the 90 subjects who desired implantation procedures, 80 were randomly assigned to one of two conditions, either active drug or placebo control. The remaining 10 were determined inappropriate for the required surgical procedures. The 10 who did not desire disulfiram implantation were followed as a "pseudocontrol" group. Wilson et al. followed all groups regularly for approximately 18 months time, losing 22% of the patients to attrition. At the end of that period the researchers reported that the disulfiram group had "significantly longer abstinence" than the placebo group ($p < .05$), hence suggesting a pharmacological effect. However, their conclusion is weakened by some major methodological flaws including the fact that their lone outcome measure (time interval between assignment to treatment and first drink) was based solely on self-reports.

One particularly rigorous investigation involving disulfiram usage was conducted by Powell, Penick, Read, and Ludwig (1985) with a subject pool of 174 male V.A. patients. In contrast to Wilson et al.'s patient population, Powell et al.'s subjects were clearly "not a Skid Row population." The overwhelming majority were Caucasian and employed, and half had not received any previous treatment for alcohol abuse. All were seeking assistance for a drinking problem and had a primary diagnosis of either alcohol abuse or dependence, based upon a thorough psychiatric evaluation and DSM-III criteria. Subjects with a history of drug abuse, a diagnosis of psychosis or organic brain syndrome, and/or with five or more previous admissions for "alcoholism" were excluded from consideration.

All subjects participated in a general psychiatric milieu treatment for 2-4 weeks and were then randomly assigned to one of three outpatient treatment regimens: a medication only group (disulfiram), an active-support (including both disulfiram and individual, marital and familial counseling), and an untreated medically-monitored condition (monthly medical examinations). Additionally, all subjects agreed to monthly assessments for an entire year. Thorough pretest measures and subsequent statistical analyses indicated that the three treatment groups did not differ with respect to sociodemographic or alcohol-related characteristics. Moreover, Powell and associates' posttest analysis demonstrated that the 15% attrition rate at the year's end did not significantly alter the groups' comparability among the measured range of patient variables.

Consistent with the study's overall design quality, the range of outcome measures was equally comprehensive. The five areas of

functioning assessed followed several earlier reviewers' recommendations (e.g., Moos & Finney, 1983; Nathan & Lansky, 1978). These included measures of drinking behavior, physical health, familial relations, job performance, and an overall functioning scale. At the end of 12 months, Powell et al. reported that none of the treatment group comparisons achieved statistical significance. Rather, "all subjects were generally rated as somewhat improved in all areas" (p. 311). Interestingly, an anticipated within-groups difference emerged, with all employed subjects in all three treatment conditions faring somewhat better than subjects who were unemployed.

Powell et al.'s (1985) investigation appeared to concur with other available findings concerning the efficacy of disulfiram treatment. Powell and her associates, like Fuller (1984) previously, noted that non-significant differences slightly favored disulfiram usage. A third study, by Wilson et al. (1980), examined a procedure for surgically implanting disulfiram. They reported significant differences favoring the implantation of disulfiram at 18 months. However, some methodological problems including a high attrition rate made this conclusion tenuous. Although possibly an active placebo, therapeutic enthusiasm for disulfiram is largely tempered by the research presented here. In fact, given the risk of notably adverse reactions, including the implications of sexual dysfunction reported by Liskow and Goodwin (1987), conventional use of disulfiram remains questionable (Miller & Hester, 1986).

Another medication frequently mentioned as an alcohol abuse treatment is citrated calcium carbimide (CCC). Marketed outside the

United States as Temposil and Abstem, CCC also produces unpleasant side effects when combined with alcohol, albeit less severe than those reported with disulfiram (Liskow & Goodwin, 1987). Although no outcome studies on citrated calcium carbimide are reviewed directly here, other reviewers have noted that the absence of any controlled evaluations of CCC render its pharmacological value indeterminable (Miller & Hester, 1986).

A range of psychotropic medications have also been utilized for treating excessive drinking. Miller and Hester (1986) have suggested that the rationale for utilizing these medications for psychopathology may also be relevant for treating alcohol abuse, either as a secondary symptom of another mental illness or as a primary treatment goal. To date, the findings on the efficacy of antianxiety, antidepressant, and antipsychotic medications as alcohol abuse interventions are unclear (Liskow & Goodwin, 1987). Recently, lithium carbonate, the pharmacological treatment of choice for Manic-Depressive Disorder, has come under scientific scrutiny as a possible treatment for excessive drinking behavior.

One well-controlled investigation of lithium as a treatment for abusive drinking was conducted by Fawcett et al. (1984). They followed a group of subjects whose drinking behavior was diagnosed as dependent ("alcoholic") and who had a concurrent diagnosis of Affective Disorder (e.g., Major Depression). At their final assessment 18 months after the intake, Fawcett et al. concluded that lithium compliant subjects (as measured by lithium blood levels) consistently maintained alcohol abstinence at higher rates than placebo compliant subjects. Interestingly, the groups did not differ on post-test

depression ratings, further supporting a lithium effect. Regrettably, Fawcett et al.'s conclusions were tainted by a high drop-out rate (30%), which seems to support Miller and Hester's (1986) assertion that an unequivocal claim of effectiveness for lithium treatment must await further research. Along these lines, a more recent study by Powell & associates (1986) which failed to meet the one year follow-up inclusion criterion, reported that lithium was not "differentially efficacious in reducing alcohol consumption" (p. 135).

The research on psychopharmacological treatments for alcohol abuse has only recently become respectable. Previously, the outcome evaluation methodology was fraught with serious problems (Liskow & Goodwin, 1987). In spite of the improvements in controlled investigations, this review concurs with previous ones that have suggested that no significant evidence exists for substantiating any medication as a primary therapeutic agent for problematic drinking. There are tentative suggestions that some medications, most notably, lithium carbonate and disulfiram, may be of value in attenuating abusive and dependent drinking behavior. Still, the lack of documented successful replications precludes identifying any currently available pharmacological treatment of alcohol abuse as reliable.

Aversion Therapies

Aversive interventions share the common goal of extinguishing an individual's attraction to alcohol. As a therapeutic approach, aversion therapies are based rather loosely on Pavlovian principles of conditioning and are procedurally quite simple. Through conditioning, or more accurately counterconditioning, alcohol is

repeatedly paired with a variety of noxious stimuli, such as an electric shock, in order to produce an adverse reaction to subsequent alcohol cues (Miller & Hester, 1980). Quite distinct from pharmacologically induced aversive reactions, such as those achieved when combining disulfiram and alcohol, aversion treatments rely on repeated conditioning and not the suppression of drinking behavior through fear of an aversive response (Miller & Hester, 1986). Aversion treatments differ from one another through the frequency, intensity, and means by which unpleasant stimuli are paired with ordinary beverage alcohol. Three types of aversion therapies will be considered in this review: nausea-producing drugs, electric shock and aversive imagery.

Nausea-producing treatments for alcohol abuse have been utilized for over 50 years. Miller and Hester (1980) reported that as early as 1935, Voegtlin, Lemere and associates were using aversive treatments for abusive drinking at Shadel Hospital in Seattle, Washington. Popularized recently through commercial alcohol treatment centers, typical aversive procedures involve either intramuscular injection, or oral ingestion of a nausea producing chemical taken in conjunction with the patient's favorite alcoholic beverage. Miller and Hester (1980) reported that initial investigations of nausea producing techniques conducted by Voegtlin, Lemere and others, claimed success rates between 60% and 70%. Since that time outcome evaluations have been clouded by selection problems, high attrition rates, and the lack of random assignment (Miller & Hester, 1986).

Neubuerger, Hasha, Matarazzo, Schmitz, and Pratt (1981) followed a total of 908 patients treated for alcohol abuse at a private hospital in Fair Oaks, California. All patients were diagnosed with alcoholism, based upon the criteria offered by the National Council on Alcoholism. After completing routine medical and physical histories and examinations, which included detoxification if necessary, the 10-day treatment program featured chemically aversive counter-conditioning sessions. The program also included other treatment elements such as individual and family counseling, and an Alcoholics Anonymous orientation. With less than 8% of the patients lost after the one year follow-up interval, Neubuerger et al. reported an overall abstinence rate of 53%. Perhaps less surprising were striking differences achieved in treatment success when controlling for patient characteristics. For example, the percentage of married and employed patients that achieved abstinence during the year following treatment was 73%.

In a study examining an alcohol treatment regime featuring similar emetic conditioning procedures, Wiens and Menustik (1983) evaluated 685 patients treated at a private facility in Portland, Oregon. With patient attrition counted among their treatment failures, Wiens and Menustik reported an overall abstinence rate at one year of slightly more than 60%. As was the case in the data presented in Neubuerger et al.'s investigation, differential abstinence rates varied tremendously with patient demographics. That is, Wiens and Menustik observed that the patients who were employed, married and educated fared significantly better on treatment outcomes.

In spite of these encouraging results, the actual efficacy of chemical aversion treatments for alcohol abuse remains unclear. For starters, the studies reviewed above utilized nausea-producing techniques as but one of many elements comprising an overall treatment regime. In conjunction with the research designs employed, the existence of other treatment components like didactic and supportive group therapies made it difficult, if not impossible, to ferret out specific treatment effects. A carefully designed comparative investigation of aversion therapies conducted by Cannon, Baker, and Wehl (1981) provided further insight along these lines.

Cannon and his colleagues randomly assigned a group of male alcoholics to one of three conditions within a multifaceted inpatient program. All patients participated in the same inpatient treatment regimen, which consisted of a number of therapeutic elements including individual, group, marital, and family therapy, assertiveness and relaxation training, and vocational and medical rehabilitation. The two experimental conditions were distinguished from the controls (regular inpatient program only) by additional emetic or electric shock aversion sessions. Thus, Cannon et al. attempted to ascertain the efficacy of two aversive therapies above and beyond what was referred to as a comprehensive broad-spectrum treatment approach.

The results from Cannon et al.'s study suggested that nausea-producing aversion therapy may increment the clinical success obtained by more traditional alcohol abuse treatment programs. However, the researchers qualified this conclusion by reporting that

these modest benefits were significant only in the first six months following treatment. Moreover, they reported that shock aversion patients benefitted least of the three groups at both the six-month and one-year assessment intervals. While Cannon et al. conceded that a comparison with a no treatment control group may have augmented the magnitude of effects, they remained convinced that they were addressing a more important line of clinical inquiry. More specifically, the authors were investigating the interaction of two aversive techniques with standard inpatient treatment components. Consequently, Cannon et al. concluded that nonsignificant differences only slightly favored additional emetic treatment over regular inpatient programing, while the aversive treatment technique of electrical shock, appeared to negatively impact the contributions of this multifaceted inpatient program.

Despite the robust methodology utilized in Cannon et al.'s design, their results must be viewed circumspectly in light of the study's small sample size ($\underline{N}$ = 20). Nevertheless, it was the sole investigation of electric shock treatment that qualified for inclusion in this review. Prior to 1980, Miler and Hester (1986) reported that research on electrical aversion therapy with problem drinkers presented a "confusing picture." They suggested that while electrical aversion therapy appears to emerge as a possible method of suppressing destructive alcohol consumption, its modest effectiveness renders it an adjunct treatment at best. In fact, if Cannon et al.'s (1981) findings can be replicated, then even this status is questionable. In other words, given the availability of other less aversive and intrusive treatment methods, it is difficult

justifying the use of electrical shock counter-conditioning therapy for abusive drinkers.

The use of aversive imagery, or covert sensitization, has emerged as a way of circumventing the potential ethical problems inherent in treatments employing actual aversive experiences (Riley, Sobell, Leo, Sobell & Klajner, 1987). Miller and Hester (1980) described Covert Sensitization (CS) as a technique whereby imagery of drinking behavior is associated with unpleasant feelings, such as imagined nausea and vomiting. Because this treatment approach is conducted entirely through imagination, its procedures also preclude actual alcohol consumption during training.

Since 1980, very few experimental investigations of CS as a treatment for abusive drinking were available. A study by Elkins (1980) used specifically administered CS interventions and a variety of physiological measures to validate a response of conditioned nausea. Working with 57 hospitalized "alcoholics," Elkins successfully achieved conditioned nausea in over 90% of the 47 patients who received at least 6 CS sessions. One year after treatment 40% of Elkins' sample was reportedly improved, as verified by self-report and collateral contact. However, Elkins noted a statistically significant difference between the conditioned and non-conditioned patients (those who had failed to achieve conditioned nausea as demonstrated by respiration, pulse rate and GSR). Elkins concluded that the success of a specifically administered CS program could be predicted by the degree of aversive conditioning established during treatment.

Another study conducted by Olson, Ganley, Devine, and Dorsey (1981) compared the long-term effects of a CS oriented treatment with two other treatment conditions. The authors randomly assigned 137 male and female patients hospitalized at an alcohol treatment center to one of four blocks: a milieu treatment control group, a behavioral group (which included CS and relaxation training), an insight-oriented therapy group (Transactional Analysis), and a combined TA and behavioral group. While Olson et al. reported "strong and consistent trends . . . favoring the [CS] approach," statistical significance was not demonstrated for the duration of the 4-year follow-up period (p. 866). However, significant treatment differences were noted between the behavioral and TA groups at 6- and 18- month intervals. In concluding, Olson and his colleagues underscored the importance of long-term assessments of treatments for abusive drinkers.

Miller and Hester (1986) reported that research on aversion therapies for abusive drinkers constitutes a substantial portion of the alcoholism treatment literature. On the basis of the controlled investigations reviewed here, it appears that aversive conditioning procedures represent an effective form of intervention. However, current research challenges, such as establishing long-term efficacy with aversive techniques, await further exploration. For example, both Cannon et al. (1981) and Olson et al. (1981) suggested that initially encouraging treatment effects are likely to diminish shortly after 6 months posttreatment.

Riley et al. (1987) further suggested that aversion treatment effects are somewhat mitigated when controlling for patient

characteristics. Some of studies reviewed here ostensibly support this (e.g., Neubuerger et al., 1981). Nevertheless, Riley et al.'s caveat notwithstanding, nausea aversion is substantiated in the learning literature, and the capacity to induce a taste aversion to alcohol has been demonstrated (Miller & Hester, 1986). The efficacy of electrical shock treatment appears more dubious, especially amidst the ethical concerns surrounding administration of any physically aversive stimulus. Finally, covert sensitization, an aversive approach involving imagery, continues to be championed by those who have designated it as a more ethical treatment alternative (e.g., Klinger, 1987).

Cognitive-Behavioral Approaches

Miller and Hester (1980) reported that the concept of moderate drinking as a treatment goal was virtually ignored until 1970, when the first controlled investigation of a moderation-oriented procedure was published. Since that time a variety of treatments for abusive drinkers with the goal of controlled drinking have emerged. Concurrently has been the equally conspicuous controversy surrounding problematic alcohol consumption and appropriate treatment goals, viz., abstinence versus controlled drinking. In reference to the controlled drinking controversy, more research is mandated, particularly to differentially diagnose abusive drinkers and subsequently match patients with the most appropriate treatment goals.

Failing to identify whether a particular drinker requires an abstinence or moderation oriented form of treatment should not preclude considering the growing body of research that posits

controlled drinking as a viable treatment option. Miller and Hester (1980) further observed that several writers have suggested that a trial run through a controlled drinking program might also represent the best form of reality-testing for resistant patients for whom abstinence will ultimately be necessary. Furthermore, a study by Booth, Dale, and Ansari (1984) recommended that except where contraindicated by medical consequences, treatment goal choices may be most therapeutic when initiated by the patients themselves.

Booth and his associates followed 37 "problem drinkers" for one year after completing a 6-week multi-modal residential program. The patients were classified into two groups based upon their goal choice at discharge of either abstinence (n = 15) or controlled drinking (n = 12). A third group consisted of patients who displayed measurable alcohol-related physical damage (n = 10) and were "strongly advised" to adopt abstinence as their discharge goal. Booth et al. observed no significant outcome differences between the first two groups (self-selected abstinence vs. controlled drinking). Moreover, Booth et al. reported that patients in each of these groups were more likely to achieve their goal, while the worst outcomes, as indicated across several indices, were consistently obtained by those from whom abstinence was medically recommended. Albeit provocative, Booth et al.'s conclusions were tempered by the unsurprising fact that the third group was comprised of the most dependent drinkers in their sample.

With some exceptions, many of the treatments oriented towards moderation coalesce into the broad category of cognitive-behavioral interventions. Along these lines, a variety of skills training

procedures have been applied to treating alcohol abuse. For example, relaxation, assertiveness, self-control, social and cognitive skills training are among the procedures discussed in the literature. Cooper, Russell, and George (1988) claimed that the rationale for these treatment methods rest upon the assumptions that (a) individuals drink as a way of negotiating stress, tension or anxiety, that is, they "drink to cope," (b) excessive alcohol consumption actually decreases inter- and intrapersonal resources required for problem solving, and, (c) cultivating the life skills required for problem-solving may help diminish one's need for alcohol. Consequently, the thrust of skills training interventions aim to help clients both monitor drinking practices and generate alternative coping responses (Ingram & Salzberg, 1988).

Miller and Hester (1980) observed that prior to 1980 available research suggested "the utility of teaching more effective assertion and problem-solving skills" to abusive drinkers (p. 94). More recently a study with junior high students suggested that cognitive-behavioral efforts to develop assertiveness and other interpersonal skills might also prove effective in preventing substance abuse. In this study Botvin et al. (1984) focused heavily on teaching students tactics for resisting peer pressure. A variety of other evaluations of skills training have reported positive results on outcome measures of both drinking behavior and target skills.

For instance, Jones, Kanfer, and Lanyon (1982) applied a skills training package to 74 alcoholics concurrently participating in an alcohol treatment program. Patients were randomly assigned to three groups. These groups included skills training, a discussion

group that focused on identifying relapse-precipitating events, and a no-additional-treatment control group. The study's outcome measures attempted to assess both drinking behavior and general areas of functioning (e.g., assertion, job performance). The experimental condition was six sessions of social skills training that included didactic and experiential practice negotiating problem-oriented situations.

Immediately following treatment, Jones et al.'s (1982) assessment found that the social skills training and discussion groups were superior to the control group, yet did not significantly differ from one another. The authors reported that this trend also continued through to the follow-up phone interviews, approximately one year later. However, reliance on self-report methods in addition to an attrition rate of over 50% largely circumvented the strength of the authors' conclusions regarding the long-term efficacy of skills training.

A study by Eriksen, Bjornstad, and Gotestam (1986) demonstrated superior methodology while employing a social skills package similar to the one investigated by Jones and associates. In Eriksen et al.'s experiment, 24 abusive drinkers diagnosed alcohol dependent by DSM-III criteria were randomly assigned to either a social skills training group or no extra treatment control condition. All 24 subjects were inpatients at an Alcoholism Treatment Center and were consequently receiving what the authors referred to as a traditional treatment program. The social skills training package emphasized assertiveness through instruction, modeling, behavioral rehearsal, feedback and a range of role playing opportunities. Thus,

Eriksen et al.'s research design enabled a comparative evaluation between a standard alcohol treatment program and the same program supplemented by the experimental condition. The design was further strengthened by procedures that facilitated greater follow-up participation (23 of 24 subjects were followed through the year), as well as continuous collateral reporting and multidimensional outcome evaluations.

Eriksen et al. reported that subjects who had received the social skills training averaged significantly less alcohol consumption, more days sober, longer periods of abstinence and more working days. This latter outcome variable was profound, especially in light of the enormous costs of missed working days attributable to alcohol abuse. The authors themselves cited data that suggested this figure could be in excess of 100 days yearly. Moreover, all of the differences noted were demonstrated at the $p < .005$ level of significance. Interestingly, Eriksen et al. advocated a continuum of improvement criteria, in contrast to the frequently utilized dichotomous outcome variables like abstinence/nonabstinence. The authors concluded that their study showed support for the efficacy of social skills training as a treatment component for dependent drinkers.

Oei and Jackson (1982) compared social skills training and cognitive-behavioral interventions with 32 patients hospitalized for alcohol abuse. Their patient sample was also selected because of pre-test assessments indicating mild to severe deficits in assertiveness. Utilizing a matched procedure, the patients were assigned to one of four treatment conditions: social skills training, cognitive-restructuring, a mixed treatment condition with cognitive-

restructuring followed by social skills training, and a supportive therapy group which functioned as the control. Booster sessions were also given at the 3-, 6-, and 12-month posttreatment intervals.

At a 6- and 12-month follow-up, all three experimental conditions were superior to the controls on a range of measures tapping general functioning and alcohol consumption. Furthermore, the subjects in groups that included cognitive-restructuring as a treatment element reported significantly less alcohol consumption than the social skills group, at both follow-up assessments. Among the cognitive behavioral techniques that Oei and Jackson suggested as particularly effective for assertion and drinking problems were ones that facilitated positive self-statements, future-oriented statements and greater self-disclosure. Although the results advocated the efficacy of cognitive-skills training, the outcome measures during the follow-up intervals were only considered for the preceding week. As was suggested elsewhere by Riley et al. (1987), the brevity of this interval was hardly representative of the entire year.

Another cognitive-behavioral treatment that has been implemented with abusive drinkers involves self-control or self-management training. Although varying among treatment programs, Behavioral Self-Control Training (BSCT) is a didactic-oriented approach designed to help abusive drinkers attain and maintain nonproblematic drinking. A method of intervention favored by W. R. Miller and colleagues, BSCT typically emphasizes goal setting, self-monitoring, self-reinforcement and alternative coping skill elements (Miller & Hester, 1980). In reviewing the outcome research with

BSCT, Miller and Hester (1980) designated it as a promising approach for teaching controlled drinking. Since 1980, Miller and colleagues have continued to evaluate self-management interventions.

In one study Miller and Taylor (1980) randomly assigned 41 abusive drinkers to four treatments: bibliotherapy (involving a self-help manual only), individual BSCT in addition to the self-help manual, individual BSCT and relaxation training, and group BSCT plus relaxation training. At the 12-month follow-up assessment Miller and Taylor found no significant differences among the four groups. In another similar study run concurrently, Miller, Taylor and West (1980) compared the effectiveness of focused versus broad-spectrum behavior therapy.

In this investigation, Miller and his colleagues randomly assigned 56 clients to four treatment conditions: a bibliotherapy group (self-help materials and no treatment sessions), and three other treatments involving BSCT. The latter treatments differed in the extent and breadth of adjunct treatment elements. More specifically, two of the BSCT groups were standardized, albeit with different treatment components (relaxation training vs. support groups), while subjects in the third group received an individually tailored regimen (i.e., focused).

Miller, Taylor, and West reported that of the initial 56 subjects assigned only 41 were considered treated (i.e., having attended a minimal number of sessions) and hence followed for treatment effect analysis. Curiously, in spite of unequal attrition across groups, the authors apparently made no attempt to determine subsequent between-group differences. Regrettably, an otherwise rigorous

experimental design yielded somewhat discouraging results. That is, other than noting that bibliotherapy subjects reported a greater amount of time intoxicated, Miller, Taylor, and West observed no other significant differences. All groups showed improvement on drinking measures, and at the 12-month follow-up 41% of the sample was reported to achieved outcome goals (abstinence or controlled drinking). In both of the above studies, the absence of a no-treatment control group precluded more definitive statements about effectiveness.

In a two-year follow-up of the 82 subjects involved in the preceding studies, Miller and Baca (1983) attempted to assess stability of treatment effects with a blind interview. With 69 of 82 subjects assessed, Miller and Baca reported that the modest improvements noted above were maintained at two years. Among the additional findings noted was the inverse relationship between probability of achieving controlled drinking and the extent of alcohol abuse. That is, the authors conceded that non-problem drinking is a less favorable treatment outcome with more severe alcohol abusers. As indicated here and suggested elsewhere (e.g., Riley et al., 1987), it appears that self-management treatment, such as BSCT, represents an effective way of intervening with abusive drinkers who are not severely dependent.

In an attempt to ferret out the above implications, Foy, Nunn, and Rychtarik (1984) examined the effects of a broad-spectrum behavioral treatment with chronic alcoholics. Utilizing a random block design, Foy et al. studied 62 chronic alcoholic veterans seeking treatment through an alcohol dependence program. All patients

received a similar treatment regimen, including but not limited to individual and group therapies, and various skills training, such as assertion practice. Cohorts were assigned to a controlled drinking skills condition and received additional training aimed at establishing and maintaining responsible social drinking.

At the end of 6 months, Foy et al. reported significant differences on several drinking indices. In concluding the authors suggested that the drinking skills condition appeared to adversely impact their subjects' capacity to manage alcohol consumption. This finding was further bolstered by similar trends in subject drinking behavior, as measured by collateral ratings. While this trend persisted through the entire follow-up year, statistically significant differences waned after the 6-month assessment interval. Nevertheless, the researchers cautioned that controlled drinking techniques with chronic alcoholics may put them at "greater risk for abusive drinking after [such] treatment" (p. 229). Similar to the research conclusions reached by W. R. Miller and colleagues, Foy et al.'s results indicated that controlled drinking outcomes are more frequently achieved by individuals with less severe drinking problems.

On the other side of the chronicity-severity continuum, Sanchez-Craig et al. (1984) evaluated a cognitive-behavioral program for 70 early-stage problem drinkers. In order to ensure that participating subjects were at an early stage of alcohol abuse, the authors assessed potential subjects against screening criteria provided by the Addictions Research Foundation. As noted by Sanchez-Craig and her associates, these criteria identified "socially stable persons with relatively short histories of problem drinking, normal cognitive

functioning, and no evidence of medical problems for which moderate use of alcohol would be contraindicated" (p. 391). All 70 subjects were taught to identify high risk situations for abusive drinking. Additionally, a range of cognitive-behavioral coping techniques and self-management competencies were also developed. Therefore, while all subjects received the same treatment program, subjects were randomly assigned to one of two goal conditions, abstinence or controlled drinking. The lone treatment discrepancy between the groups consisted of concurrent instruction in moderate drinking for the assigned controlled drinkers.

The authors attempted to strengthen the validity of their outcome data by supplementing self-report measures with convergent information from collateral reports and biochemical markers. Regrettably, in spite of these efforts, collateral reports were only available for slightly over 50% of the subjects at 6 months, and a mere 33% at the 12-month follow-up. The biochemical corroboration of self-report drinking was more encouraging. Throughout the two year follow-up no significant differences between the two goal groups were observed at 6-, 12-, 18- or 24-month assessment intervals. This was determined valid on outcome measures related to both social adjustment and alcohol consumption. In spite of findings that both abstinence and controlled drinking subjects were "equally successful in reducing their drinking," Sanchez-Craig et al. concluded that controlled drinking was a more suitable goal for their sample. The authors argued this position largely because it was identified as "more acceptable" by the majority of clients (p. 399).

In general the range of cognitive-behavioral skills training procedures reviewed here represent adjunct treatment components typically added to more traditional alcohol treatment programs. In fact, with the exception of the studies conducted by W. R. Miller and colleagues, other evaluations of skills training approaches involved comparisons between experimental conditions, which amounted to additional treatment, and standard inpatient treatment regimes. As noted by Eriksen et al. (1986), a disadvantage of this type of research design is the difficulty determining and/or isolating the effects of individual therapeutic agents. Nevertheless, the results reported here are generally encouraging.

In summary 3 of the 8 cognitive-behavioral approaches reported significant differences favoring the experimental conditions. While not all of the remaining five studies utilized control group comparisons, they all observed trends that suggested improvement for substantial portions of their sample. Interestingly, the study with the most rigorous experimental design, Eriksen et al. (1986), also reported the most significant treatment effects for a skills training procedure. While these results seemingly indicate that skills training interventions represent effective treatment options for the samples under examination, only the research by Miller and Baca (1983) and Sanchez-Craig et al. (1984) offered follow-up data for longer than one year. Because the decay of treatment effects is a common problem, the strength of skills training interventions will be affirmed only with successful longitudinal replications.

A final caveat emerges when cognitive-behavioral skill training interventions are employed with samples displaying chronic and

severe drinking behavior. More specifically, the outcome evaluations by Miller and his associates and Foy et al. (1984) suggested that implementing moderation-oriented drinking skills may adversely impact the alcohol consumption of more abusive drinkers. It must be noted that Eriksen et al. achieved highly favorable results with a sample of dependent drinkers. However, even Eriksen et al. curiously noted that during drinking days, clients receiving skills training drank twice as much as the controls. The findings presented here and suggested by other reviews (e.g., Riley et al., 1987) have pointed toward growing evidence that self-control training may not be the treatment of choice for the most severe populations, especially when controlled drinking is the designated treatment goal.

Individual and Family Psychotherapies

A range of more traditional psychotherapeutic interventions have also been applied to the treatment of abusive drinkers. Regrettably, the biggest obstacle to evaluating individual, marital and family psychotherapies is the general ambiguity concerning what exactly transpired during these interventions. Consequently, very few studies have adequately assessed psychotherapy as an intervention for abusive drinking (Miller & Hester, 1986). In fact, Miller and Hester (1980) reported that prior to 1980 the few controlled investigations available indicated that "insight-oriented psychotherapy does not represent a treatment of choice for alcoholics" (p. 46). Moving beyond the criticism of treatment inertia, George E. Vaillant has warned of the potential dangers of psychotherapy as a treatment for abusive drinkers. For example, Vaillant (1981) suggested that without working toward establishing

sobriety, individual psychotherapy might actually be detrimental for alcoholics.

In the sole outcome study of individual psychotherapy qualifying for inclusion, Brandsma, Maultsby, and Welsch (1980) compared insight-oriented psychotherapy to three other treatment conditions and a no-treatment control group. Brandsma et al.'s sample consisted primarily of alcohol-related offenders who were court-referred following convictions for driving while intoxicated. All of these subjects were classifiable as "alcoholic" based upon the criteria offered by the National Council on Alcoholism (1972). Employing random assignment, Brandsma and his colleagues divided the subjects among five groups: The four outpatient treatments included insight therapy, two groups receiving cognitive-behavioral therapy, one conducted by a professional and the other by a paraprofessional, and attendance at Alcoholics Anonymous. The fifth group consisted of controls for whom only a list of community services was provided.

Brandsma et al.'s experimental design and methodologies were very thorough. Among the recognizable strengths of their study was the fact that therapy was only provided by clinicians who were proponents of their respective treatment models. Failing to ensure that subjects in both experimental and control conditions are treated by equally trained and committed therapists was one of common methodological problems identified by Nathan and Lansky (1978). Although Brandsma et al.'s screening and assessment procedures were also quite extensive, only 104 of the 197 subjects who initiated treatment qualified for the follow-up evaluations (e.g., attending at least 10 sessions). Given this reduction, the authors conceded that

significant self-selection factors were likely to color the study's results. More importantly, there were no significant differences between the subjects who dropped out versus those who stayed in.

Consistent with the study's overall thoroughness, outcome measures covered a range of drinking variables and indices of general functioning. Furthermore, follow-up assessments were scheduled regularly through the entire posttreatment year. Through the early follow-up intervals, Brandsma et al. reported that collectively, all treatments displayed significant improvement over the controls on a variety of measures. However, by the final follow-up interval the previously demonstrated significant differences were almost entirely diminished. In fact, at 12 months the lone significant difference remaining emerged on a drinking frequency scale, with the insight and cognitive-behavioral therapy subjects indicating notably less drinking days.

Making definitive statements on the basis of one comparative outcome evaluation is a pernicious undertaking. However, Brandsma et al.'s findings seem consistent with the majority of research evidence prior to 1980. In spite of the fact that Brandsma et al. observed significant differences favoring psychotherapy initially (both insight-oriented and rational therapies), these differences were not demonstrated one year later. From this perspective, individual psychotherapy as a primary treatment for abusive drinking appears marginally beneficial at best. Even as a marginally effective therapeutic agent, psychotherapy's possible benefits appear relatively short-lived. Elsewhere, Miller and Hester (1986) have suggested that in the absence of persuasive evidence for efficacy,

ongoing research represents a relatively "futile" exercise. Perhaps this implication also explains the paucity of recent outcome studies that have evaluated individual psychotherapies as treatments for alcohol abuse.

Recently various marital and family therapies have generated enthusiasm among those in the alcohol treatment field. Because of the range of psychosocial and emotional casualties associated with alcohol abuse, a growing body of evidence has suggested a reciprocal relationship between family interactions and abusive drinking. For example, O'Farrell (1987) has emphasized the considerable role marital and familial influences play in the development and maintenance of abusive drinking. Similarly, Moos and Finney (1983) have noted that positive familial adjustment is consistently associated with favorable treatment outcomes. Realizing this, alcohol treatment programs are increasingly incorporating marital and family therapies into their treatment regimens (Miller & Hester, 1986).

However, like individual psychotherapy, the variety family therapies represents a broad range of theory and methods. For example, Miller and Hester (1980) reported that specific marriage and family therapy techniques have included everything from utilizing support groups for nonalcoholic spouses to family meetings that exclude the abusive drinker. Still, Miller and Hester (1980) concluded that prior to 1980 controlled investigations of marriage and family interventions "provided modest support for their efficacy relative to alternative approaches and control conditions" (p. 61).

Two recent studies that evaluated the effects of spouse involvement in alcohol treatment qualified for the present review.

McCrady, Moreau, Paolino, and Longabaugh (1982) conducted a four-year follow-up investigation that compared the effects of three treatment conditions: joint inpatient admission of the alcoholic and spouse, outpatient spouse involvement, and no spouse involvement. The subjects consisted of 33 couples, each including one alcohol abuser. Alcohol abuse was determined through the criteria presented by the American Psychiatric Association's Diagnostic and Statistical Manual, as well as self-reports and scores on the Michigan Alcoholism Screening Test. The couples were randomly assigned to the three experimental conditions, with no between-groups differences existing on either alcohol consumption or sociodemographic variables at the pretest.

At 6 months after discharge, results suggested that both groups with spouse involvement showed significant decreases in drinking behavior as indicated by a quantity-frequency measure, whereas those treated individually did not. Moreover, a full 84% of the those whose treatment included spouse involvement reported either abstinence or non-problem drinking at that time. Of parenthetical interest to McCrady et al. were indications that the spouses who were jointly hospitalized also showed significant reductions in their alcohol consumption. The authors also reported that all subjects showed significant improvement on measures of psychological distress, marital problems, and alcohol impairment, with non-significant differences slightly favoring the spouse-involved conditions.

McCrady et al. reportedly commenced a four-year follow-up to assess the durability of these initial findings, in addition to determining whether or not subsequent differences among the treatment conditions had emerged. Of the 33 couples initially evaluated, McCrady et al. located at least one spouse. For 17 of the 33 couples, data were obtained from at least two sources, while the authors reported that inadequate data was the case with only 5 couples of the original sample. Similar to the half-year posttreatment assessment, a wide range of variables were assessed, this time through a structured interview covering drinking and life-event parameters.

The longitudinal results indicated that the significant differences had disappeared. Once again non-significant differences favored those individuals from the jointly hospitalized condition. Among the areas where this trend was noted included both subjective drinking status and periods of abstinence. In concluding, McCrady et al. suggested that conjoint involvement appeared to be a beneficial form of intervention for certain married alcoholics. Because of the acknowledged decay in outcome over the 4-year follow-up, the authors qualified the treatment gains as short-term. McCrady et al. also suggested that their findings further strengthened the "common caveat" associated with alcohol treatment outcomes using follow-up data of less than one year.

In another well-designed evaluation of marital therapy as a treatment for alcohol abuse, O'Farrell, Cutter, and Floyd (1985) compared two methods of group marital interventions with controls who received only individual outpatient treatment. All of O'Farrell et

al.'s subjects were male alcohol abusers who had recently commenced outpatient treatment through a local Alcoholism Clinic. For inclusion in the study subjects also had to have been married for a minimum of one year, and could not be older than 60 years. Couples who qualified and consented to participate met for two pretreatment assessment sessions, to be interviewed jointly and separately for a variety of information related to both drinking behavior and marital satisfaction. Subsequently, 34 couples were randomly assigned to a no-marital treatment control group, or to 10 weekly sessions of either an interactional or Behavioral Marital Therapy treatments.

O'Farrell et al. claimed that the goal of both types of couples groups was to decrease the alcohol-related marital conflicts, while facilitating increased positive interaction. The Behavioral Marital Therapy (BMT) group differed from the interactional treatment condition on the basis of behavioral rehearsal, weekly homework assignments, and mutual behavioral contracts (e.g., taking Antabuse). By comparison the interactional treatment incorporated spouse involvement through emphasizing mutual support, disclosure, and problem-solving through group discussion.

After exceptionally extensive data analyses, O'Farrell et al. reported that couples who had received BMT displayed significantly superior results on marital adjustment ratings in comparison to controls. The reported differences between BMT and the Interactional group were less pronounced, albeit of the significant differences observed, all favored the BMT group. The initial assessments of subjects' drinking adjustment revealed non-

significant differences, with the authors reporting that all groups had experienced "very substantial short-term improvements in their drinking" (p. 164). Interestingly, by the 18-month follow-up most of the significant differences between the groups were no longer evident.

Taken in conjunction with research provided by McCrady et al. (1982), the treatment outcomes demonstrated by O'Farrell and his colleagues appear to support earlier reviews which have identified conjoint marital intervention as a promising treatment for abusive drinkers. It is suggested that only further research can substantiate marriage and family treatments as impacting more than short-term gains. As noted here, significant improvements apparently erode sometime after 6 months. Along these lines, another study by McCrady and her colleagues (1986) has demonstrated efficacy with spouse-involved outpatient treatments. Although encouraging, these initial findings must await validation at a longer follow-up period. Alcohol abuse interventions that incorporate concurrent familial treatment represent a promising way of mediating the relationship between family functioning and abusive drinking.

Conclusions

An old Chinese proverb suggests that "First the man takes a drink, then the drink takes a drink, then the drink takes the man." The ravaging costs associated with alcohol abuse are reportedly far greater than the costs of all cancers and respiratory diseases combined. Still, it is estimated that as few as 15% of those diagnosable with alcohol consumption problems ever receive

treatment (Vaillant et al., 1983). The regrettable verity of this situation has prompted Whitfield (1988) to claim that alcohol abuse is "one of the most untreated treatable" disorders in all of medicine (p. 465). Moreover, in spite of shifting public sentiments and the campaigns to curtail the misuse of alcohol, the most recent figures continue to suggest the pervasiveness of alcohol-related problems. As a primary form of chemical dependence, abusive drinking is arguably a national epidemic.

Several treatment approaches have been advanced in response to this crisis. Many of these treatments have been systematically examined and have demonstrated efficacy in reducing alcohol consumption, the initial step in treating alcohol-related problems (Miller & Hester, 1986). However, because alcohol abuse is frequently a chronic disorder, treatment effectiveness must continue to be evaluated in the context of a longitudinal perspective. Subsequently, this review focused on the treatment outcome studies published since 1980 that have presented follow-up data for at least one year.

Summary of Treatment Evaluations

The conclusions drawn from the pharmacological studies examined in this paper concur with previous reviews. That is, they have suggested that no definitive evidence exists for substantiating any medication as a primary therapeutic agent for problem drinking. More specifically, therapeutic enthusiasm for disulfiram is largely negated by the research. In fact, on the basis of the studies reviewed, much of disulfiram's therapeutic impact can seemingly be attributed to placebo effects. There are tentative suggestions that

lithium carbonate may be of some value in attenuating abusive drinking, but the lack of further documentation presently precludes identifying it as a reliable treatment of alcohol abuse.

It appears that nausea-producing aversive methods are effective measures for circumventing abusive drinking. However, the effectiveness of other aversive counterconditioning procedures such as electric shock and covert sensitization appear less certain. The lone study comparing an electric shock technique to nausea-producing methods actually suggested a negative impact. Moreover, while covert sensitization appears to be a promising alternative that requires no physically aversive agents, stronger support of its efficacy awaits further investigation. Establishing long-term efficacy with aversive techniques is another concern, especially since the research indicates that initially encouraging gains are likely to diminish as soon as 6 months after treatment.

The outcome data from the range of cognitive-behavioral techniques largely supports the growing body of evidence that designates these interventions as effective treatments with early-stage abusive drinkers. Albeit equivocal, the bulk of the evidence also suggests that skills training and other self-control interventions are not the treatments of choice for chronically abusive drinkers. In other words, controlled drinking is not indicated as a viable treatment goal for severe alcohol abusers. In fact, some of the outcome evaluations even suggest that implementing a moderation-oriented drinking skills approach may have an adverse impact on the most severe populations.

Despite the support ostensibly gleaned from uncontrolled research and/or case studies, the lone controlled investigation of individual psychotherapy yielded disappointing results. Quite simply, individual psychotherapy as a primary treatment for abusive drinking appears to be marginally beneficial. Yet, even as a dubiously effective therapeutic agent, psychotherapy's potential benefits seem relatively short-lived. Because this finding is consistent with the crux of the evidence presented elsewhere, it is alarming that individual psychotherapy continues to be an oversubscribed alcohol abuse treatment (Miller, 1987).

Finally, the recent therapeutic enthusiasm for conjoint marital and family interventions was supported by this review. Although controlled investigations of family systems treatments are still in their infancy, a variety of spouse-involved conditions have demonstrated some therapeutic promise. In theory, marital and family therapies appear to represent a method of mediating the interaction between family functioning and abusive drinking. However, current support appears substantiated at intervals of less than one year. While encouraging, these initial findings need to be bolstered by validation at longer follow-up intervals.

Implications for Practice

Miller and Hester (1986) have suggested that a plenary approach to treating abusive drinkers requires a two-stage process. The initial step involves interventions that can help terminate, or at least mitigate, excessive alcohol consumption. Secondly, though of no less importance, the treatments employed must also help the abusive drinker maintain his or her sobriety. Because the evidence suggests

that the erosion of treatment effects is disconcertingly rapid, Ingram and Salzberg (1988) have urged that greater attention must be given to maintenance strategies. This proposed shift is further justified by Vaillant et al.'s (1983) longitudinal research, which has demonstrated that recovery from alcoholism is best conceptualized as a long-term process. Consequently, the treatment procedures themselves may be a necessary but not sufficient condition for successful recovery (Ito & Donovan, 1986).

Further evaluation of the treatment methods reviewed is possible within this framework. For example, while certain aversion methods have proven effective in initially stopping alcoholic drinking, these treatments do not address the full range of environmental contingencies surrounding alcohol abuse. In other words, because alcohol abuse does not occur in a vacuum, the treatment of abusive drinkers, like the outcome evaluations themselves, must consider more than an individual's drinking behavior. It is a relatively easy venture to eliminate the psychophysiological aspects of alcohol dependence, by at least initiating the cessation of drinking. It is far more difficult to maintain treatment improvements across the range of alcohol-related problems (McLellan et al., 1982).

It is likely that a patient might maintain the abstinence he or she has achieved at a treatment facility for a few months after discharge. Yet, if they return to family problems, work-related conflicts and the like, ill-equipped to engage these struggles alcohol-free, then they are primed for a relapse of abusive drinking (Schonfeld & Morosko, 1988). At this level, some of the effective skills training techniques are likely to help the abusive drinkers cultivate problem-solving

competencies. It is tenable that cognitive-behavioral interventions are more likely than aversive techniques to support the maintenance of treatment gains. Moreover, it is clear that marital and familial treatments might also help engender social contexts that support alcohol-free living.

For these reasons it has been predicted that relapse prevention will continue to emerge as an extremely important concept in alcohol abuse treatment (Riley et al., 1987). The protracted courses that alcohol abuse and dependence frequently take necessitate extended rehabilitation. Consequently, it appears expedient that treatment approaches are increasingly embracing the need for facilitating aftercare arrangements. According to Ito and Donovan (1986), the effects of aftercare have had a demonstrated influence on treatment outcomes. For example, a study by Ahles, Schlundt, Prue and Rychtarik (1983) provided support for the impact of aftercare on the maintenance of treatment success. Ahles et al. reported that patients participating in aftercare groups postdischarge maintained significantly greater treatment gains than nonparticipating patients.

It is precisely at this juncture where Alcoholics Anonymous (A. A.) and other similar support groups emerge as invaluable treatment adjuncts. While relatively few controlled investigations of Alcoholics Anonymous are available (e.g., Brandsma et al., 1980), its programmatic structure and provision of a network of interpersonal resources are unmistakable. Vaillant et al.'s (1983) advocacy of A. A. has been much stronger. As a result of an eight-year follow-up, Vaillant and his associates have claimed that other than good premorbid social status, Alcoholics Anonymous was the only extra-

treatment factor that independently contributed to sustained abstinence. On the strength of these findings, Vaillant et al. concluded that, among other things, "effective treatment" of advanced alcoholics was facilitated by subsequent A. A. attendance.

Riley et al. (1987) observed that, regardless of treatment, relapse "is a very real and a very frequent phenomenon" (p. 107). Like Vaillant, Riley and her associates concluded that recovery from abusive drinking is most realistically conceptualized as a gradual improvement with the possibility of relapse. From a converging perspective, McLellan et al. (1982) have emphasized that the idea of cure for abusive drinkers is not a legitimate term when evaluating treatment effectiveness. In fact, McLellan and his associates have stated that treatment studies offering traditional outcome criteria in terms of patients "abstinent" or "improved," imply simplicity where none exists. Consequently, the most effective methods of treating abusive drinkers will combine interventions that not only alter drinking behavior directly, but additionally encourage constructive means of maintaining alcohol-free living, even if this process is interrupted by relapse.

The long-term outcome research reviewed here suggests that the most effective way to treat abusive drinkers would glean methods of intervention from the three categories with demonstrated clinical success. The emerging multi-modal approach would initially target abusive drinking directly. For example, depending upon the severity of dependence and/or levels of intrinsic motivation, nausea-producing aversive measures might assist in the management and termination of self-destructive drinking patterns. However, it should

be noted that aversion therapies are not indicated if they are neither necessary nor desired to curtail alcohol consumption. Moreover, while abstinence, or a nonabusive drinking baseline is being established, a combination of skills training and family therapies seemingly represent the most expedient means of maintaining treatment gains. These treatments not only appreciate the interaction between abusive drinking and an individual's milieu, but additionally, they afford the opportunity to identify and cultivate alcohol free coping resources. Along these lines, encouraging participation in Alcoholics Anonymous and other support groups ostensibly rounds out the need for ongoing aftercare. These groups can help replace the previously dysfunctional environmental contingencies with the interpersonal resources necessary for recovery.

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VITA

NAME:

Keith McLaughlin Douds

EDUCATION:

Rosemead School of Psychology Clinical Psychology	Psy.D.	(Cand.)
Rosemead School of Psychology Clinical Psychology	M.A.	1987
Harvard Graduate School of Education Counseling & Consulting Psychology		1984-1985
Harvard University Psychology & Social Relations	B.A.	1982

PRACTICA:

Biola Counseling Center, Biola University Outpatient Counseling	1987-1989
Behavioral Medicine Unit, Midwood Community Hospital Inpatient Psychiatry	1988
Whittier Union High School School Psychologist Trainee	1986-1987

EMPLOYMENT:

Minirth-Meier Clinic West Staff Psychotherapist	1988-present
Tri-City Family Guidance Center Assistant Director	1988-1990
Tri-City Family Guidance Center Marriage, Family & Child Counselor	1986-1990